

WITH THE FARMERS

By Prof. W. F. MASSEY

Now, most men would jump to the conclusion that the lime acted as a manure on this cover. Perhaps it did to a slight extent, but the main effect was in the release of the insoluble potash that abounded in the red hills. The lime best the plant. In doing this, the clover got the benefit. This leads me to consider potash in the red hills of Piedmont.

All of the blood-red clays in the Virginia Piedmont are the result of the decomposition of granitic rocks that are largely composed of feldspar, and feldspar is very rich in potash. But potash, while abundant in these clays, is in an insoluble state, and plants cannot use it.

When I was farming in Albemarle county, I began to buy lime, my neighbors told me that it was useless to apply it there, and that it did no good. I found that so far as lime needed, a plant food was concerned there was no good deal in the soil, but it had gotten so inert that the surface soil was not able to get all the potash needed. The chief use of lime on that class of soils is that it releases the potash and allows it to be used by plants, and thus saves the purchase of a fertilizer.

Then, too, the lime, by sweetening the soil, encourages the growth of clover, and clover sods turned under, as a humus-making material, and when we get this humus, it will be stocked with decaying vegetation, the organic acids act on the insoluble potash, and they aid in the releasing, and the potash is abundant in the red hills of Piedmont, and there is no danger that it will ever be exhausted.

Here, then, is another argument for the practice of a short rotation that will rapidly bring the potash into use and save its purchase. Therefore, I am narrowing down the fertilizer needs.

If, through the use of lime and the increase of organic decay in the soil, we can get all the potash needed, and through the growth of peas and clover, we can get all the nitrogen needed, we are narrowed down to the fact that on such soils the only fertilizer a good farmer needs to buy is one that carries phosphorus, and we have seen that where there is an abundance of humus material in the soil the farmer can profitably use the cheaper carrier of phosphorus, raw pulverized phosphoric acid, and make another saving, while checking the tendency to acidity in the soil.

At the continued use of acid phosphate, the farmer is robbing the soil of lime carbonate. Therefore, when a farmer gets his land into such a state that the only fertilizer needed is phosphoric acid, he will have reduced the cost of crop production very greatly, and the profit in his business is largely dependent on the saving in cost of production.

The Great Difficulty in Sowing Peas
The great difficulty in sowing peas after grain is not only that they are then rushed with the corn cultivation, but it is apt to be so dry that it is almost impracticable to break the stubble land, and the farmer is "squeezed" between the corn and the peas. If you have a disk plow and a good heavy team, you can break any stubble in dry weather. But if you have no disk plow, then try going over the stubble with a heavy harrow both ways, and then start the disk plow, and my word for it you can plow land that you could hardly stick the disk in before the disk. And the disk plow is the best for this work than the plain disk.

Resting Land.
If you grow corn and peanuts, but I do not follow one directly after another, but the corn land rests the winter season in pasture, and it put in the peanuts the next year. I sow peas in the corn for the hogs to gather after the corn is taken off. It is not best to rest the land, but if you have a disk plow and a good heavy team, you can break any stubble in dry weather. But if you have no disk plow, then try going over the stubble with a heavy harrow both ways, and then start the disk plow, and my word for it you can plow land that you could hardly stick the disk in before the disk. And the disk plow is the best for this work than the plain disk.

Not that sorrel will not thrive on sweet and fertile soil; for, given a chance to do so, it will grow all the better for good conditions. Just as any plant will. But you have probably done as the majority do, thinking that the pasture is a thing that can take care of itself and feed stock without your doing anything for it. If the grass in the pasture had had a top dressing of bone every spring and some lime every sixth year, you would have had a growth of grass that would have given me a chance to be sorrel.

If I had a pasture overrun with sorrel, I would break it deeply at once and prepare it well, and would sow cowpeas, and in September, or after the peas are mature, I would disk them down and then sow the clover and harrow in a good dressing of slaked lime, and then reseed the land to grass, as suggested recently in a reply to a letter from a mountain grazier. Then, after getting a sod on the land, keep it good, in the way I have more than once suggested. Too many of our pastures are a disgrace to the farm, and I have often been told that a permanent pasture cost of the Blue Ridge is certain to run into only broomsedge. This is doubtless generally the case. If you do not encourage the better grasses, Nature will give you the broomsedge, but keep the soil fertile, and sweeten it with an occasional liming, and broomsedge will never get the upper hand. Broomsedge comes in because the soil gets too acid and poor for better grass.

Onions Running to Seed.
My onions from fall-planted sets are running to seed, and will not make onions, of course they are. I plant sets in the fall only for heavily green onions, for they will surely run to seed and not make good, ripe onions unless the sets were of the Yellow Potato onion, which never makes seed. Years ago I saw seed of the Blue Ridge lettuce in early August, and transplanted them to a very rich bed, and can have them headed early in November, and if you have frames and glass sashes you can sow again in September and set the plants in the frame to head in early winter. Then I use the double-labeled hot-bed sashes, and under these I sow radishes and beets about New Year's, and have the radishes in the winter and move the sashes to other places in March for my tomato plants and let the beets remain exposed till ready to pull. Some glass sashes on frames are very interesting and useful in the garden, and by their help I have lettuce and radishes from November till June. Then one of the most useful winter vegetables is the leek. It is now too late to sow these. I sow them in a bed in April, and in July transplant them in rather deep furrows heavily fertilized. Then as they start to grow, the soil is pulled and the plants are killed up some, as we want to make large and white shanks. These are very hardy and can be pulled for use during the winter whenever the soil is not frozen, and they take the place of green onions till the onions come in.

From Orange County. I read with much pleasure your instructive advice in The Richmond Times-Dispatch. Can you tell me what is the matter with my potatoes? I have bought seed of the Irish Cobbler and the Blue Ridge. The vines are luxuriant, and have some bloom, but in digging we find some pieces of the old potatoes, some of which I am sending you, and in some places one or two new potatoes, small as they are. I have placed them in the old potato bin, and I am sure that the matter is the second time we have had this happen, and others have the same difficulty, and a man near Alexandria says he is going to give up potatoes because of this trouble. For years there has been a great deal of bloom on potatoes here. In my grandmothers time this garden made fifty to sixty bushels of potatoes from planting two and a half bushels. Last year I planted a bushel and three weeks and made a bushel and a half. I have quoted this letter rather fully because it is illustrative of the general result in planting potatoes in old gardens. The whole difficulty seems to me to be the deficiency in the soil of the mineral matter that makes the tubers. You say that the topsoil is very thin, and shows that the soil is well supplied with nitrogen, and you have probably been using only stable manure on the garden, and to make potatoes this is formerly a good thing. The land formerly made good potatoes. It would do now, but for the fact that it has become deficient in the very things that make the tubers, the phosphoric acid and potash. Now to grow potatoes in an old garden that has for years had only stable manure, I would have to use liberally of acid phosphate and sulphate of potash. These are the materials that aid in the formation of starch and its location in the plant where needed, and if you have not big tops and for or no potatoes, it is because the soil is deficient in these materials. Now plant some late potatoes in that same garden. Plant them as I have before suggested, in deep furrows. But before planting put in the furrows acid phosphate and sulphate of potash at a rate of 800 pounds of each of sulphate of potash and acid phosphate and seventy-five pounds of sulphate of potash an acre, and mix it well in the soil in the bottom of the furrows. Plant seed of the Irish Cobbler that have been kept in cold storage, and which you can buy from Richmond seedsmen. Cover them very lightly at first, and then, as they grow, gradually all in the earth to them, and then when level keep them well cultivated shallowly and level to retain the moisture. If you do this you will find that the garden will still be capable of growing potatoes, and next spring try the same with the early potatoes, only with them plant as usual and hill up the rows for the early warmth. The only trouble with the potatoes is that you have gotten an excess of nitrogen in the soil, and the other elements to make potatoes. In my garden I never use manure for potatoes, but always a commercial fertilizer that analyzes 2 per cent ammonia, 8 per cent phosphoric acid and 10 per cent potash. It is very common to find pieces of the old potatoes still sound in the hills, and this indicates nothing but healthy seed.

Soy Beans for Hogs.
Will soy beans make more feed for hogs to gather than cowpeas will? Yes and no. The beans will make more seed, and probably more high protein feed, but the hogs will eat less of the plants than of the peas. If the hogs are turned on cowpeas as soon as the pods are well filled and the vines tender, they will eat pods and vines too, while with the more erect and rather woody soys, they will eat mainly the pods. Now whether these will make more pork than the peas is a problem that can only be solved by careful experiments. My own opinion, until proved wrong, is that the peas will beget the soy beans in making gain on the hogs.

Keep the Buzzards Away.
Buzzards and dogs are the greatest carriers of hog cholera we have. I notice that some States have repealed the law protecting buzzards, and it should be repealed in every State. If every State had a law that would keep buzzards away from the hogs, it would not be so bad; but so long as people hunt dead animals out in the woods, the buzzards will carry the infection all over the neighborhood. Every one has a right to protect his premises, and I hardly think that any court would fine a man for shooting buzzards on his farm.

Sorrel Pasture.
The sheep sorrel is something the grass out of my pasture. How shall I get rid of it? The sorrel thrives because there are now conditions in the soil that favor it at the expense of the better crops of grass. Sorrel and broomsedge will thrive in acid conditions in the soil that are unfavorable to grass and clover, and sorrel will grow, too, in land that has gotten so

poor that better crops cannot thrive. Not that sorrel will not thrive on sweet and fertile soil; for, given a chance to do so, it will grow all the better for good conditions. Just as any plant will. But you have probably done as the majority do, thinking that the pasture is a thing that can take care of itself and feed stock without your doing anything for it. If the grass in the pasture had had a top dressing of bone every spring and some lime every sixth year, you would have had a growth of grass that would have given me a chance to be sorrel.

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MORE RADICAL CUTS URGED UPON SENATE

(Continued From First Page.)
Aldrich rates can be disposed of without the handicap of the effect of reduced tariff rates.

Change in Date Necessary.
The date upon which the income tax can be computed for the first year was changed to March 1, for the reason that the date in the bill, January 1, 1913, would make the section unconstitutional inasmuch as the income tax amendment to the Constitution was not ratified by two-thirds of the States and proclaimed by the Secretary of State until February 25, 1913.

The amendment as to tax cotton futures was introduced by Senator Clarke, of Arkansas, but the provision agreed to by the committee modified the provisions of the original amendment somewhat. It provides that sales or agreements to sell cotton for future delivery conforming to the rules of cotton exchanges, boards of trade or similar associations shall be subject to a tax of one-tenth of 1 cent a pound, the tax to be refunded in all cases if the cotton actually is delivered. The amendment is designed to prevent gambling in cotton futures. The tax would be paid by affixing stamps to the written contract, and the amendment provides the necessary money for its enforcement.

Protests from California wine producers against the committee amendment to the liquor schedule, calculated to bring the \$7,000 in annual revenue, did not move the committee except to grant an amendment making the provision effective January 1, 1914, instead of immediately after the passage of the bill. Under the present law the full revenue tax of \$1.10 a gallon will be demanded on all brandies used in fortifying sweet wines. Since 1899 a tax of \$1.10 a gallon on such brandies has been levied.

Additions to Free List.
In revising rates referred to it by the caucus, the committee voted to put antimony ores on the free list, and to bring into the tariff schedule a metal schedule, which carried a duty of 25 per cent ad valorem. Jute bags, used largely for wheat, were reduced from 15 to 10 per cent; machine-made films from 25 to 20 per cent; wood shavings from 10 to 5 per cent; and formerly dutiable at 25 per cent, the Senate bill having divided them into classes, ranging from 5 to 25 per cent. At a night session of the committee, the question of fixing a time when the new tariff schedule should be effective, was taken up.

General tariff revision more radical in many of its features than that proposed by the Underwood bill, will be reported to the Senate late this week, when Chairman Simmons reports the new draft of what will hereafter be known as the Underwood-Simmons bill. Heavy reductions from the Underwood rates, upon many articles of household and commercial necessity, and a general average almost 5 per cent below that of the Underwood revision, will be recommended for the approval of the Senate, backed by the almost unanimous indorsement of the Democratic caucus.

Grinding Works. By the caucus has brought the bill close to completion. When the final stamp of caucus approval is placed on the measure, it will contain practically all of the severe reductions by the committee, and will represent the greatest reduction in tariff rates ever proposed in Congress.

NO REDUCTION IN C. & O. DIVIDEND

Trumbull Announces That Regular Five Per Cent Payment Will Be Made.

NO LOW PRICE EXPLANATION

Stock Goes to 53, but Company Earns Fraction Over Its Dividend Rate.

Chesapeake and Ohio at this week's low price, 53, was selling at 45 points lower than New York Central and 50 points under St. Paul, two other stocks paying 5 per cent dividends. The yield on Chesapeake and Ohio at this week's low price was nearly 10 per cent. To the uninitiated that yield would naturally suggest that the directors had decided to reduce the dividend rate. Chairman Trumbull, however, has gone on record as saying that the company would earn a fraction over 5 per cent this year, and that a reduction in the dividend rate had not been considered. In fact, it has been officially stated that the regular 5 per cent rate would be continued. Some other explanation must be found, therefore, for this week's low price.

Prior to 1909 Chesapeake and Ohio never paid more than 1 per cent per annum, that rate being established in 1899. In 1909 the rate was increased to 3 per cent, and in 1910 it was advanced to 5 per cent. Here is the company's stock record and dividend record for the past decade:

	High.	Low.	%
1913.....	55 1/2	53 1/2	5
1912.....	55 1/2	53 1/2	5
1911.....	55 1/2	53 1/2	5
1910.....	55 1/2	53 1/2	5
1909.....	55 1/2	53 1/2	5
1908.....	55 1/2	53 1/2	5
1907.....	55 1/2	53 1/2	5
1906.....	55 1/2	53 1/2	5
1905.....	55 1/2	53 1/2	5
1904.....	55 1/2	53 1/2	5
1903.....	55 1/2	53 1/2	5
1902.....	55 1/2	53 1/2	5
1901.....	55 1/2	53 1/2	5
1900.....	55 1/2	53 1/2	5

Pennsylvania controlled Chesapeake and Ohio up to 1906, or until A. J. Cassatt became disturbed over the activities of the government in enforcing the anti-trust law. Cassatt turned his Chesapeake and Ohio over to Kuhn, Loeb & Co., with instructions to find a buyer. The stock remained with Kuhn, Loeb & Co. until 1909, when Edwin Hawley formed a syndicate and acquired control of the property. As shown above, Hawley lost no time in increasing the dividend, first from 1 per cent to 3, and then from 3 per cent to 5.

How the Hawley policy worked out is shown in the following table, giving Chesapeake and Ohio's net income, fixed charges, dividend payments and appropriations from surplus earnings for improvements per mile for the past seven years, or since control passed out of the hands of Pennsylvania:

	Net Fixed Divi-	Imp.
1912.....	\$5,949,840	\$1,289,000
1911.....	5,541,491	1,499,000
1910.....	6,950,372	1,377,000
1909.....	5,784,369	662,112
1908.....	5,119,306	341,345
1907.....	5,149,323	244,738
1906.....	5,640,232	349,855

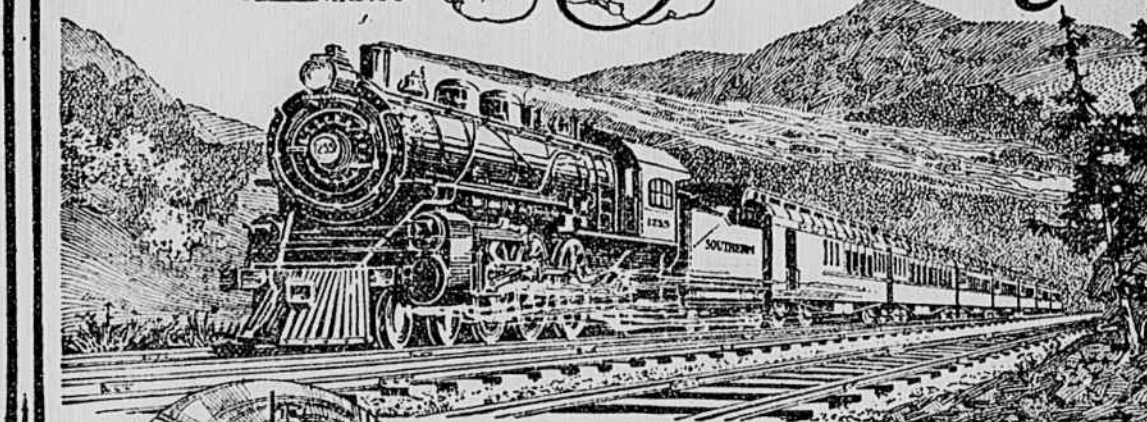
Since Pennsylvania relinquished control of Chesapeake and Ohio that company's net income applicable to fixed charges has increased 7 per cent; its fixed charges increased nearly 40 per cent; its dividend requirements have grown larger by nearly 300 and appropriations from surplus earnings for improvements have gradually dropped off from \$555 per mile to nothing.

For the ten months of the current fiscal year Chesapeake and Ohio reports an increase of \$141,000 in gross earnings, but a decrease of \$978,000 in net. According to the official estimates, the company will show 54 per cent for the \$6,752,000 on stock this year, but that surplus will be made possible through the extra dividends declared by subsidiary companies.

Thus it would seem, says the New York Evening Post, that Chesapeake and Ohio is in a position to pay a dividend of 5 per cent.

Men Welcome Mother's Friend
A Duty that Every Man Owes to Those who Perpetuate the Race.
It is just as important that men should know of progressive methods in advance of their mothers. The suffering of motherhood, the suffering of child-bearing can be easily avoided by having a bottle of "Mother's Friend."

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And Ohio's low price was due, not to any fear that the dividend rate would be reduced, but to a general feeling that the directors intended to continue a rate that should never have been established.

PEOPLE TO GOVERN CURRENCY SYSTEM

(Continued From First Page.)
United States, and in establishing the Federal reserve board to exercise this governing function, we do not think it proper to permit private persons to have representation upon such governing board.

"We think it no more reasonable to grant this demand of the bankers that it would be to authorize the railroads to have representation and exercise a part of the governing power of the Interstate Commerce Commission, which is charged with the duty of regulating the railroads. It would, perhaps, be but little different if the beef-packers should demand representation in administering the pure food act and regulating their own conduct."

It has been suggested that some of the largest national banks might go out of this system and become State banks, because of their displeasure at not having representation on the governing Federal reserve board, and because they were not satisfied to have their correspondent banks put a part of their reserves in the Federal system, and for the further reason that they were displeased at the United States issuing public currency and the bill not giving the right to the reserve banks to issue the currency of the country.

Expect Banks to Reluctance.
"We have taken national banks to ascertain the grounds of these objections and feel justified in saying that there is no reason to apprehend that any national bank will go out of the system because of the provisions of this bill, but that they will generally rejoice at the opportunity afforded them of having a more stable condition in the finance and commercial world."

"ANIMAL" DANCES BANNED IN BOSTON

(Continued From First Page.)
public dances which are enjoyable, while at the same time time-consuming, the Mayor is greatly gratified at the offer of assistance which has come to him from the Musicians' Union. The union musicians of the city are banded together against the "first-class" music which is being played at the dances. The supervisors will have to hold up their hands to stop objectionable music.

THIS DOCTOR ONLY 149 YEARS OLD

[Special to The Times-Dispatch.]
New York, June 29.—Chao Choy, a Manchurian doctor from Ching Wang Tao, who says he is 149 years old, debarked from the Elms Island ferry today, and, with seven other Manchurians, younger doctors, started for the Canadian Northwest.

4th OF JULY EXCURSION

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